

## UNCRATING/INSTALLATION INSTRUCTIONS

RELIANCE® 300

Laboratory Glassware Washer

(12/98)  
Rev. 1

**P-122993-618**

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# A WORD FROM STERIS CORPORATION

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Follow each step of the uncrating/installation instructions in the order presented. Open the carton carefully to avoid damage to the equipment inside. If you find any indication of damage to the equipment (no matter how slight), show it to your supervisor.

To properly install this unit, you will need the Equipment Drawings (previously furnished), showing all utility service and space requirements. If drawings cannot be located, replacement copies may be obtained by writing, wiring, faxing or telephoning STERIS giving the serial, equipment and model numbers of your washer.

Once installed, washer operation should be tested by a STERIS-trained service technician prior to your usage of the equipment.

If STERIS supervision is desired for installing and starting up this equipment, contact the STERIS Regional Office nearest you.

## Indications for Use

The Reliance® 300 Laboratory Glassware Washer is designed for efficient cleaning of laboratory glassware, plasticware and metal goods typically used in research, support production and quality control laboratories. This washer is specifically designed to only process goods as outlined in the Operator Manual (P-122993-619). If there is any doubt about a specific material or product, contact the manufacturer of the product for the recommended washing technique.

## Advisory

A summary of the safety precautions to be observed when uncrating, installing and testing this washer can be found in Section 1 of these instructions. Do not begin uncrating/installing this equipment until you have become familiar with this information.

**IMPORTANT:** Be sure to check the Occupational Health and Safety Act, as well as local electric and plumbing codes, for any special requirements that may pertain to installation of this unit.

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# SUMMARY OF WARNINGS AND CAUTIONS

1


The following is a summary of the safety precautions which must be observed when uncrating, installing and operating this equipment. WARNINGS indicate the potential for danger to personnel and CAUTIONS indicate the potential for damage to equipment. These precautions are repeated (in whole or in part), where applicable, throughout the instructions.

## WARNING-PERSONAL INJURY AND/OR EQUIPMENT DAMAGE HAZARD:

 When moving the unit, use a forklift. Do not use door(s) or door handle(s) for lifting.

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## WARNING-LACERATION/EYE INJURY HAZARD:

 When removing bands, wear eye protection and always use a tool specifically designed to cut the bands. The bands used to secure this carton can cause personal injury when cut and tension is released.


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## WARNING-LACERATION HAZARD:

 When removing bolts, wear gloves to protect your hands.

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## WARNING-BURN HAZARD:

 When checking the automatic stop feature, wear gloves and face protection and open chamber door slowly. Hot water/steam may be sprayed through door opening if door is opened during a cycle.

 When blowing out utility supply lines, wear gloves, face shield and protective clothing.


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## WARNING-PERSONAL INJURY HAZARD:

 When closing chamber door, use door handle. Keep fingers/hands away from top and sides of door to prevent fingers from being crushed.

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## WARNING-FALL HAZARD:


 To prevent falls, keep floors dry. Promptly clean up any spills or drippage.


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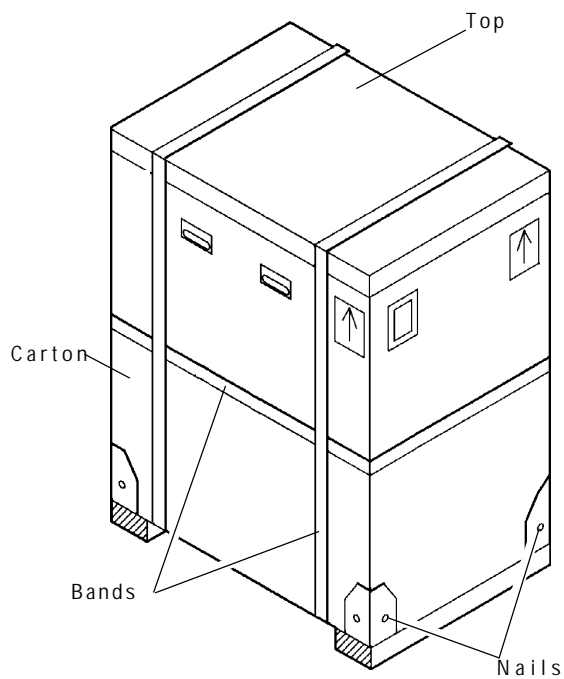
## CAUTION-POSSIBLE EQUIPMENT DAMAGE:

 After utilities are connected to washer, slowly remove the protective adhesive paper from the exterior cabinet panels to reduce the level of static discharge.

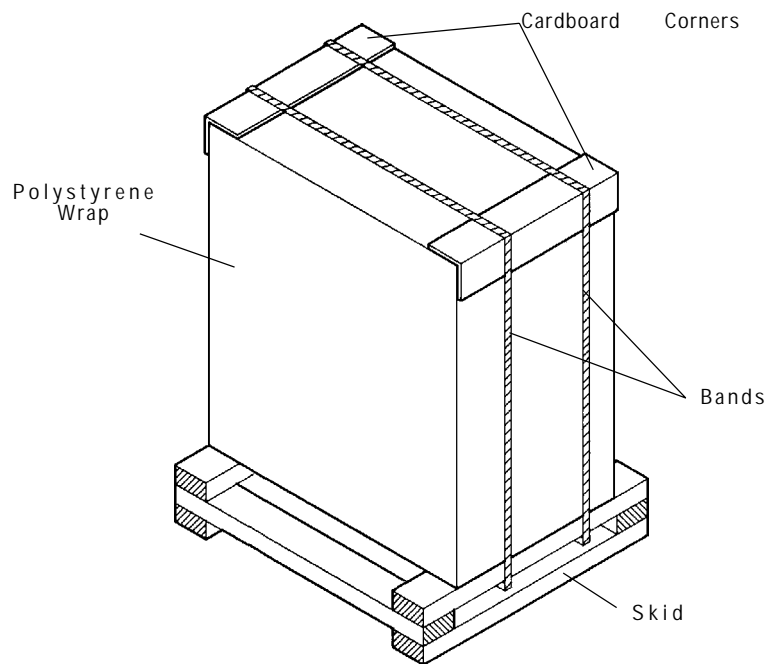
 When removing adhesives from stainless steel, use a small amount of non-flammable cleaning solvent. Rub in a back-and-forth motion (in same direction as surface grain). Solvent rubbed in a circular motion or applied with a wire brush or steel wool on door and chamber assemblies can be harmful to stainless steel. Do not use solvents on painted surfaces.

 Once three-phase power is connected, check pump for correct rotation. Incorrect pump rotation may result in pump damage and improper cleaning action.

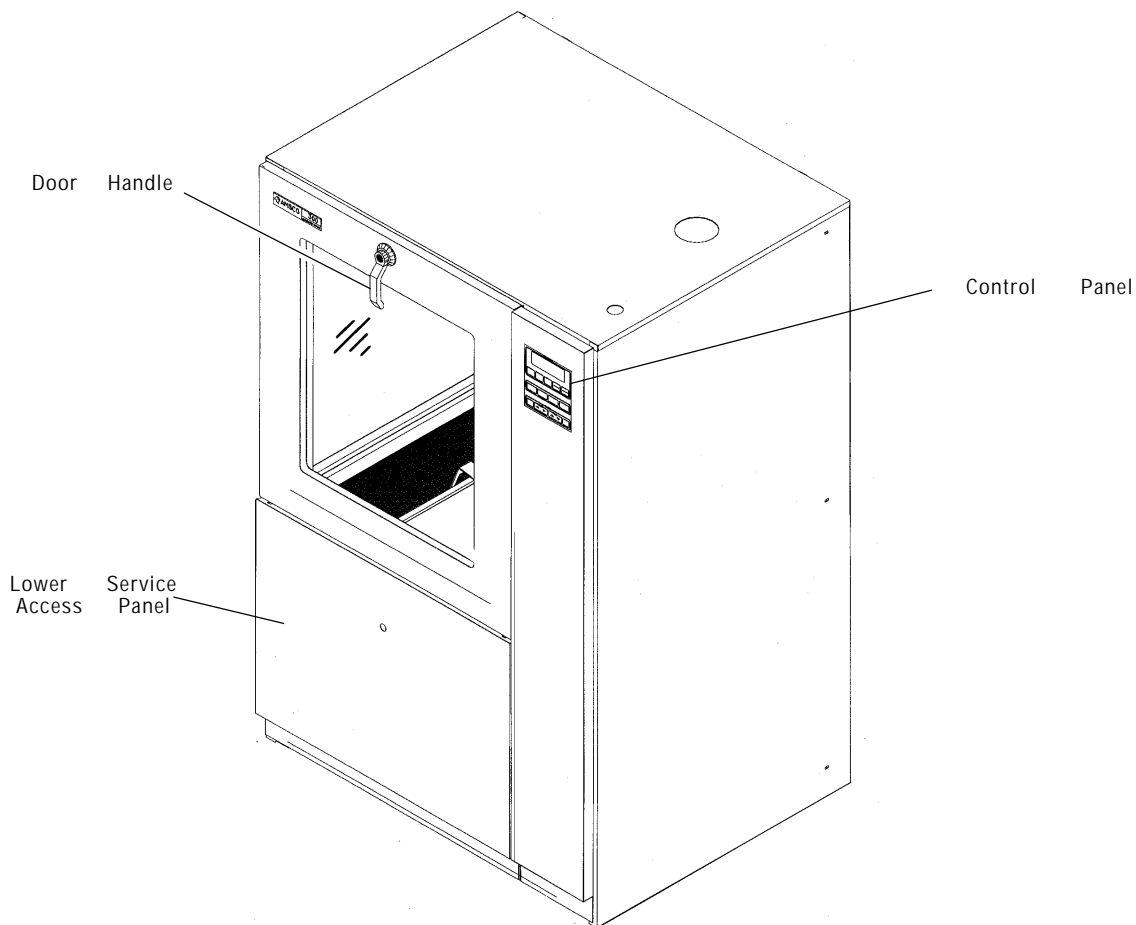
 Before operating unit, always position each manifold over a manifold connector. If manifolds are not positioned correctly, damage may result and unit will be unable to effectively wash loads.



**Figure 1. Remove Bands**



**Figure 2. Remove Packing Material**



**Figure 3. Reliance 300 Laboratory Glassware Washer**

## Open Carton

**WARNING - PERSONAL INJURY AND/OR EQUIPMENT DAMAGE HAZARD:** When moving the unit, use a forklift. Do not use door(s) or door handle(s) for lifting.

**WARNING - LACERATION/EYE INJURY HAZARD:** When removing bands, wear eye protection and always use a tool specifically designed to cut the bands. The bands used to secure this carton can cause personal injury when cut and tension is released.

**NOTE:** Washer weighs approximately 800 lbs (363 kg). Use a forklift to move the unit.

**NOTE:** Uncrate on level floor as close to installation site as possible.

1. Position unit to open cardboard carton from the top. Provide a clear work area on all sides.
2. Carefully cut and remove bands from carton (see Figure 1).
3. Discard bands before continuing.
4. Lift off cardboard top.
5. Remove nails attaching cardboard to skid.
6. Pull cardboard carton away from unit. Discard carton.
7. Carefully cut and remove second set of bands (see Figure 2).
8. Discard bands before continuing.
9. Remove and discard cardboard corners and polystyrene wrap from around unit (see Figure 2).

**NOTE:** Do not remove protective adhesive paper from the exterior cabinet panels until after utilities are connected.

10. Locate keys for the lower service access panel.
11. Remove lower service access panel and check tip indicator, located inside lower service compartment (see Figure 3). Tip indicator contains a blue compound at the bottom of the indicator. If unit has been tipped, residue from the blue compound will be found higher up in the indicator.

If unit was tipped, notify STERIS regional office. A service technician will review the equipment and determine if unit was damaged.

12. Re-install lower service access panel.

## Move Washer and Remove Skid



**WARNING - PERSONAL INJURY AND/OR EQUIPMENT DAMAGE**  
**HAZARD:** When moving the unit, use a forklift. Do not use door(s) or door handle(s) for lifting.



**WARNING - LACERATION HAZARD:** When removing bolts, wear gloves to protect your hands.

1. With washer still mounted on skid, use a forklift to move washer to installation site.
2. Remove four lag bolts securing washer base to the skid.
3. Remove and discard skid from under washer. If necessary, use a piece of plywood as a small ramp to slide washer from skid to floor.
4. Position washer in final location. Use tubing as rollers and roll the washer into position.

## Prepare Washer for Installation



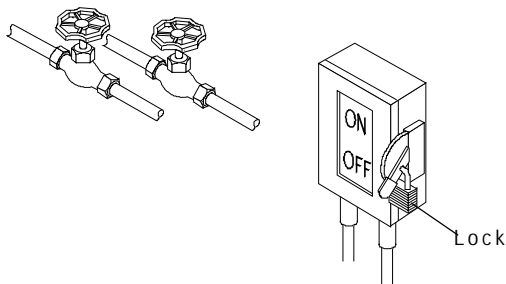
**WARNING - PERSONAL INJURY**  
**HAZARD:** When closing chamber door, use door handle. Keep fingers/hands away from top and sides of door to prevent fingers from being crushed.

**NOTE:** Do not remove protective adhesive paper from the exterior cabinet panels until after utilities are connected.

1. Open chamber door. If accessories are ordered with unit, remove nylon straps securing accessories to chamber frame and slide accessories out of wash chamber.
2. Remove Operator Manual from wash chamber. Make sure appropriate person receives Operator Manual.
3. Remove nylon straps securing rotary spray arm assembly at top of wash chamber.
4. Remove tape securing debris screen and manifold connector in bottom of wash chamber (sump).
5. Remove tape blocking the sump drain opening, located under the sump heating coil or electric heating element.
6. Close chamber door.
7. Discard all packing material removed during uncrating procedures.



## Before Installing Equipment



**Figure 4. Utility Service Connections**

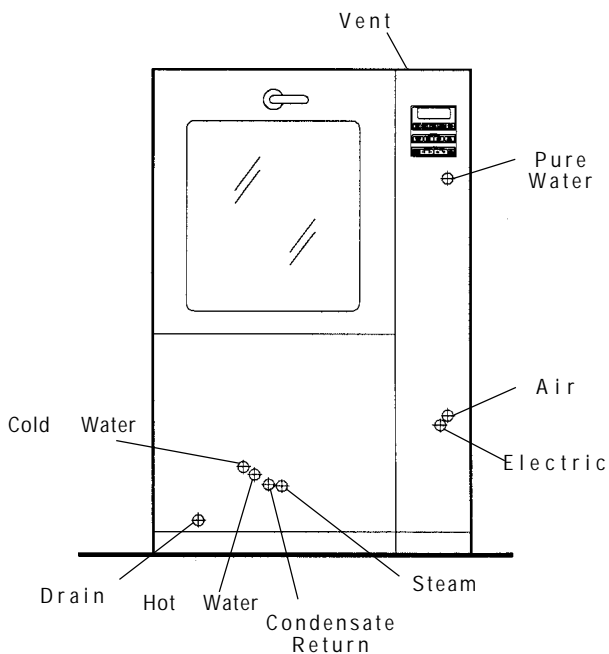
**WARNING - BURN HAZARD:** When blowing out utility supply lines, wear gloves, face shield and protective clothing.

1. Review installation requirements:
  - a. Clearance - Clearance space shown on Equipment Drawing is necessary for easy installation and proper operation and maintenance of washer.
  - b. Barrier wall flange(s) installation - Refer to Equipment Drawing for barrier wall installation.
  - c. Utility service lines:
    - To allow service on unit without shutting off building supply lines, shutoff valves (not by STERIS) should be installed on steam, air and water lines to unit (see Figure 4). Shutoff valves must be capable of being locked in the OFF position only.
    - Disconnect switch (not by STERIS) must be installed in electric supply line near washer (see Figure 4). Disconnect switch must be capable of being locked in the OFF position only.
    - If this machine is installed next to other equipment, shutoff valves and disconnect switch should be located so that service can be shut off to one piece of equipment at a time.
    - Utility service requirements are shown on Equipment Drawing. This machine requires either 120/208 volts, 60 Hz, 3-phase, 4-wire; or 480 volts, 60 Hz, 3-phase, 3-wire power. Check Equipment Drawing or Identification Plate (located inside lower service compartment on bottom of chamber sump, see Figure 3) for proper voltage.
    - Blow out all utility supply lines to remove chips, scale, etc.
2. Make sure washer is placed, as shown on Equipment Drawing, in correct relation to building supply lines. If unit is not at installation site, refer to Uncrating Instructions (Section 2) for proper moving instructions.
3. Check level of washer.
  - Place a spirit level on top and along side of washer cabinet.
  - Level washer, end-to-end and side-to-side, using leveling legs located at base of washer.

## Connect Utilities

1. Unlock and remove lower service access panel.
2. Connect the following building supply lines to the washer (see Figure 5).
  - HOT WATER - Connect line to washer connection, accessible from lower service compartment.

**NOTE:** Water is hot; safely run water line to a sink or drain.



**Figure 5. Washer Connections**

- COLDWATER (required only if equipped with Drain Discharge Cooldown and Cold Water Pre-wash option) - Connect line to washer connection, accessible from lower service compartment.

- STEAM (required on Steam Heated units only) - Connect line to washer connection, accessible from lower service compartment.

**NOTE:** *Live steam; safely direct steam discharge to an open drain.*

- CONDENSATE RETURN (required on Steam Heated units only) - Connect building condensate return line to washer connection, accessible from lower service compartment. Condensate return must be vented and non-pressurized.

- DRAIN - Connect building waste line to washer drain line, accessible from lower service compartment.

- VENT - Connect building ventilation system to washer vent connection, accessible from top of washer.

- PURE WATER- Connect building supply line to washer connection, accessible from lower service compartment.

- AIR - Connect building supply line to washer connection, accessible from lower service compartment.

- ELECTRIC - Connect building electrical supply to washer junction box, accessible from lower service compartment. Verify tight electrical connections.

3. Open building supply valves and check for leaks. Correct if necessary.

## Cleanup

**CAUTION:** After utilities are connected to washer, slowly remove the protective adhesive paper from the exterior cabinet panels to reduce the level of static discharge.

**CAUTION:** When removing adhesives from stainless steel, use a small amount of non-flammable cleaning solvent. Rub in a back-and-forth motion (in same direction as surface grain). Solvent rubbed in a circular motion or applied with a wire brush or steel wool on door and chamber assemblies can be harmful to stainless steel. Do not use solvents on painted surfaces.

1. Re-install and lock lower service access panel.
2. Remove all protective paper from the washer cabinet panels. Slowly peel paper away from stainless steel to reduce the level of static discharge.
3. Remove any adhesive found on panels, door(s) and inside chamber with a small amount of non-flammable cleaning solvent. Keep solvent away from all painted surfaces or damage may result.
4. Inspect washer and work area to be sure all materials used during installation have been removed.

**THIS COMPLETES THE INSTALLATION.** Before operating equipment, confirm that all items on Installation Checklist (Section 4) have been satisfactorily implemented and Operational Test (Section 5) is conducted by a qualified service technician.

Installation checklist must be completed after the washer is installed and prior to performing the operational test to assure complete and correct installation.

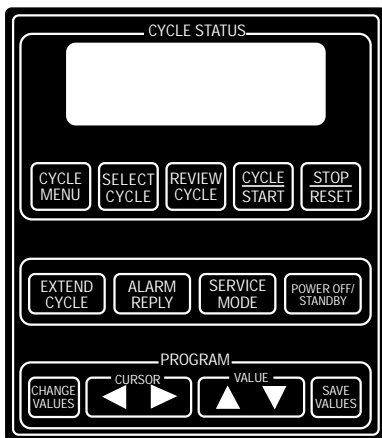
**NOTE: Contact your STERIS sales representative to demonstrate proper equipment operation and schedule a technician to test your installation.**

- ☐ Shutoff valves (not by STERIS), for maintenance purposes and capable of being locked in OFF position only, installed on steam, air and water lines and in compliance with local codes, OSHA standards, etc.
- ☐ Disconnect switches (not by STERIS), capable of being locked in OFF position only, installed in electrical supply lines near the unit and in compliance with local codes, OSHA standards, etc.

**NOTE: If unit is installed next to other equipment, shutoff valves and disconnect switches should be located so that service can be shut off to one piece of equipment at a time.**

- ☐ Washer positioned, as shown on Equipment Drawing, with required clearance space and in relation to building supply lines.
- ☐ Washer is level.
- ☐ If washer is equipped with Drain Discharge Cooldown and Cold Water Pre-wash option, building cold water line supplies water to unit at dynamic pressure and temperature as specified on Equipment Drawing.
- ☐ Building hot water line supplies water to unit at dynamic pressure and temperature as specified on Equipment Drawing.
- ☐ If Steam Heated unit, building steam line provides steam to unit at dynamic pressure as specified on Equipment Drawing.
- ☐ If Steam Heated unit, building condensate return line is connected to washer as specified on Equipment Drawing.
- ☐ Pure water line supplies water to unit at dynamic pressure as specified on Equipment Drawing.
- ☐ Building air line supplies air to unit at static pressure as specified on Equipment Drawing.
- ☐ Building waste line is connected to washer as specified on Equipment Drawing.
- ☐ Building ventilation system is connected to washer as specified on Equipment Drawing.
- ☐ Electrical supply for unit is as specified on Equipment Drawing.
- ☐ Floor surrounding unit has non-slip surface.

**WARNING - PERSONAL INJURY HAZARD:** When closing chamber door, use door handle. Keep fingers/hands away from top and sides of door to prevent fingers from being crushed.



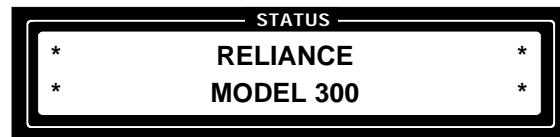
**Figure 6. Control Panel**

Test procedures included in this section should be performed by a qualified service technician prior to normal operation of the washer.

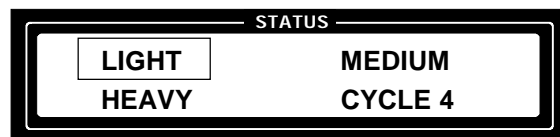
1. Open chamber door. Check that debris screen is positioned in wash chamber sump.
2. Check that wash chamber is empty and all packing material (tape and nylon straps) has been removed.
3. Remove manifold connector and inlet filter from bottom of wash chamber.
4. Unscrew rotary spray holder and lower the rotary spray arm assembly from top of wash chamber. Remove rotary spray arm assembly from chamber.

**NOTE:** There is a loose bushing between the rotary spray hub and top of wash chamber. When lowering rotary spray arm assembly, bushing will fall. Be sure to hold onto bushing while removing and lowering rotary spray arm assembly.

5. Close chamber door. Make sure main power switch, located in upper service compartment (see Figure 3), is in ON position.
6. Press Power-Off/Standby Touch Pad once (see Figure 6). Verify that model name temporarily appears on the display screen,



followed by the first cycle menu screen:



☐ Indicates flashing position.

7. Press Cycle/Start touch pad once to select the LIGHT cycle. Verify name of selected cycle appears on display screen.



**NOTE:** Pressing **Cycle/Start** once will select the cycle corresponding to the cycle name flashing on the display screen.

8. Press **Cycle/Start** touch pad a second time to start the selected (LIGHT) cycle.

**NOTE:** If **Cycle/Start** is not pressed a second time while the selected cycle name is displayed, screen automatically returns to the cycle menu.



**CAUTION:** Once three-phase power is connected, check pump for correct rotation. Incorrect pump rotation may result in pump damage and improper cleaning action.



**WARNING - BURN HAZARD:** When checking the automatic stop feature, wear gloves and face protection and open chamber door slowly. Hot water/steam may be sprayed through door opening if door is opened during a cycle.



**WARNING - FALL HAZARD:** To prevent falls, keep floors dry. Promptly clean up any spills or drippage.



**CAUTION:** Before operating unit, always position each manifold or accessory header over a manifold connector. If manifolds or accessory headers are not positioned correctly, damage may result and unit will be unable to effectively wash loads.



**WARNING - PERSONAL INJURY HAZARD:** When closing chamber door, use door handle. Keep fingers/hands away from top and sides of door to prevent fingers from being crushed.

9. Check that pure water storage tank (optional) begins to fill as soon as the cycle is started. If not, contact a STERIS service technician. Check that tank does not overflow.
10. Once chamber sump is filled with water, check rotation of the recirculation pump as follows:
  - a. Unlock and remove lower service access panel.
  - b. While viewing the pump motor shaft, alternately press the **Cycle/Start** and **Stop/Reset** touch pads.
  - c. Verify motor shaft is rotating in direction indicated by the arrow on the motor housing. If pump is rotating in the wrong direction, disconnect main 3-phase power, reverse any two 3-phase wires, reconnect power and check shaft rotation.
  - d. Re-install and lock lower access panel.
11. Wearing the proper safety protection (gloves and face shield), check automatic stop feature as follows:
  - a. Being careful of hot water escaping, open chamber door during Pre-wash treatment. Verify that all services to the wash chamber are automatically shut off. Press **Alarm Reply** touch pad to silence alarm buzzer. Close chamber door.
12. Press **Stop/Reset** touch pad and open chamber door.
13. Remove and clean debris screen under running water. Replace screen in chamber sump.
14. Place bushing on top of rotary spray hub and reattach rotary spray arm assembly to top of wash chamber.
15. Replace inlet filter and manifold connector.
16. Insert empty manifold into wash chamber.
17. Close chamber door and press **Cycle/Start** touch pad to resume cycle operation.
18. Inspect piping, in side and lower service compartments, for leaks. If any leaks occur, tighten appropriate hose clamp connections and unions.
19. Allow cycle to run to completion. Use the Operator Manual provided to verify proper unit and cycle operation.

20. Verify alarm buzzer sounds and the following operator instruction appears on display screen once cycle is complete.



21. Open chamber door and allow chamber and accessories to cool before unloading. Verify display screen returns to the first cycle menu once door is opened.
22. Remove screens from utility supply-line strainers and check for debris. Clean screens if necessary.

**WASHER IS NOW READY FOR NORMAL OPERATION.** Contact your local STERIS representative for a demonstration on how to operate the equipment. Refer to the *Operator Manual* (P-122993-619) for washer operating instructions.



## **Protect your STERIS equipment with cost-effective extended service agreements**

The best way to prevent costly downtime due to equipment malfunction is with regularly scheduled maintenance performed by qualified technicians trained in the latest technology. STERIS offers annual maintenance agreements to give your capital equipment planned maintenance that will help correct little problems before they become big ones. STERIS Engineering Service combines the precise maintenance program and factory-trained technicians to assure you of maximum productivity.

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